SIEMENS

ARCADIS Avantic

SP

Installation and Startup

System

I.I. laser light localizer

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Required Parts

NOTE **These instructions are also the instructions for annual maintenance.**

- I.I. laser light localizer
  - I.I. laser light localizer
  - Labels

Required aids

- Toolbox (including set of Allen keys)

Configurations

- The I.I. laser light localizer is available as an add-on for:

- ARCADIS Avantic with 33 cm (13") I.I.

Safety information

General safety information (in existing documents)

⚠WARNING

Danger of injuries, death or material damage.

Non-compliance can lead to death, injury or material damage.

Please note:

- ➪ **The product-specific safety notes in these instructions,**
- ➪ **The general safety information in TD00-000.860.01... and**
- ➪ **The safety information in accordance with ARTD Part 2.**

⚠WARNING

Electrical voltage!

Non-compliance can lead to severe bodily injury and even death.

- ➪ **The internal uninterruptible power supply of the system (UPS) provides several components with line voltage - even when the system is switched off or the system power plug is disconnected.**
- ➪ **Before the system is programmed to the local line voltage/line frequency, it is to be disconnected from the power supply (the power plug is to be disconnected) and the voltage output plug of the UPS is to be disconnected as well.**

Protective conductor resistance test information

Observe the instructions in the "Safety Rules for Installation and Repair" (ARTD-002.731.17 ...).

The protective conductor resistance of 0.2 ohms must not be exceeded.

First measured value

In the case of systems thoroughly tested at the factory prior to delivery, the protective conductor resistance test was already performed and the measured values were recorded in the system test report.

The measurements were performed using the measuring procedures and measuring equipment recorded in the system test report.

The test report is included with the accompanying documentation.

If no covers were opened while installing the system and no additional components (e.g. options) were installed or modified, the values recorded in the test report including the measuring point (e.g. cover of the basic unit or cover of the image intensifier) can be used in the protective conductor resistance report as the first measured value.

If the power plug was changed during system installation, covers were removed, or additional components were installed or modified, the values provided in the test report are invalid.

The values are to be labeled invalid. Cross out the values, enter the comment "invalid value" and confirm this with name, date and signature.

The protective conductor test must be performed again after all work has been completed.

In the case of systems with no measured values for the protective conductor test recorded in the system test report, the protective conductor test is to be performed after all work has been completed.

Measurement

The measurement must be performed according to DIN VDE 0751, Part 1 (see ARTD Part 2). In this case the protective conductor resistance for all touchable conductive parts must be measured during the normal operating state of the system.

Make sure that control cables or data cables between the components of the system are not mistaken for a protective conductor connection.

During the measurement the power cable and additional connection cable with the integrated protective conductor (e.g., monitor cable between the basic unit and monitor trolley) must be moved section by section to detect cable breaks.

The protective conductor resistance must not exceed 0.2 ohms.

The values, including the measuring points, must be recorded as first measured values in the protective conductor resistance report.

The measuring procedure and the measuring device used (designation and serial number) are also to be documented.

Separate the page with the report from these instructions and file it in the "Reports" register in the system binder or log book.

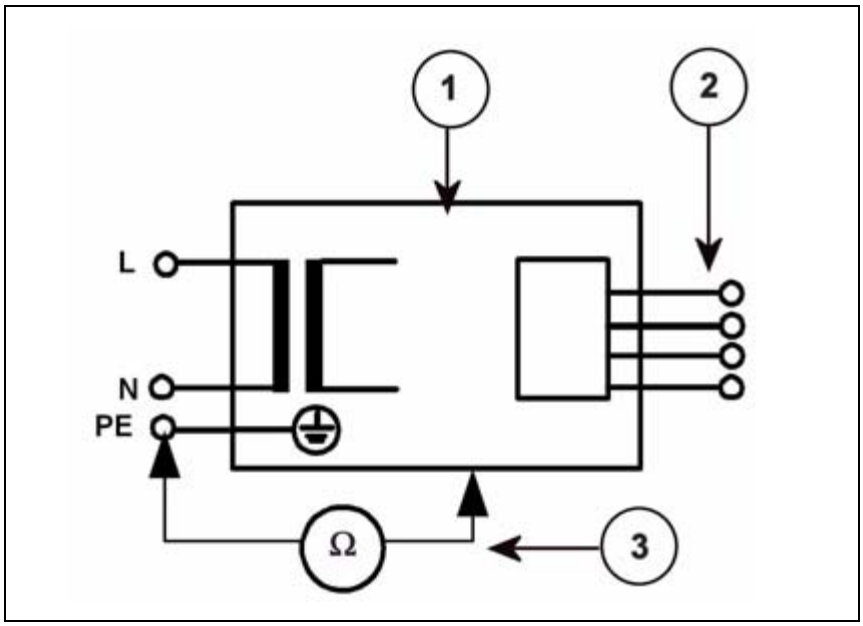

Fig. 1: Measuring circuit for measuring the protective conductor resistance for units that are disconnected from power, in compliance with DIN VDE 0751-1/2001-10, Fig. C2.

Pos. 1 = System

Pos. 2 = Application part type B (if available)

Pos. 3 = Measurement setup (integrated into measuring device)

Repeat measurement

In the case of maintenance or repairs, perform the protective conductor resistance measurement again.

Document and assess the values determined in the repeat measurement.

The measurement must be performed according to DIN VDE 0751, Part 1 (see ARTD Part 2). In this case the protective conductor resistance for all touchable conductive parts must be measured during the normal operating state of the system.

Make sure that control cables or data cables between the components of the system are not mistaken for a protective conductor connection.

During the measurement, the power cable and additional connection cables with the integrated protective conductor (e.g. monitor cable between the basic unit and monitor trolley) must be moved section by section to detect cable breaks.

The protective conductor resistance must not exceed 0.2 ohms.

The values determined in the repeat measurement, including the measuring points, must be recorded and assessed in the protective conductor resistance report.

The measuring procedure and the measuring device used (designation and serial number) are also to be documented.

NOTE

For evaluation purposes, the first measured value and the values documented during maintenance or safety checks are to be compared to the measured values. A sudden or unexpected increase in the measured values may indicate a defect in the protective conductor connections (protective conductor or contacts) - even if the limit value of 0.2 ohms is not exceeded.

Laser light localizer option

(Comment: Information applies to line-type lasers of laser class 1M, e.g., laser light localizers, I.I. / ARCADIS Avantic)

⚠CAUTION

Laser emissions!

This product contains lasers of the class 1M. (USA: Laser class 1M)

Non-compliance can result in injury.

- ➪ **Observe the safety information in ARTD-002.731.03... When working with the laser light localizer, do not look directly into the laser beam.**

NOTE

Laser emissions!

There is no direct hazard to the eye (blinking reflex). Nevertheless do not look directly into the laser beam.

Installation of the I.I. laser light localizer

Preparation

- Removeable grid with grid segment - remove by loosening screws (see (1/Fig. 2 / p. 9) and (1/Fig. 3 / p. 9)).

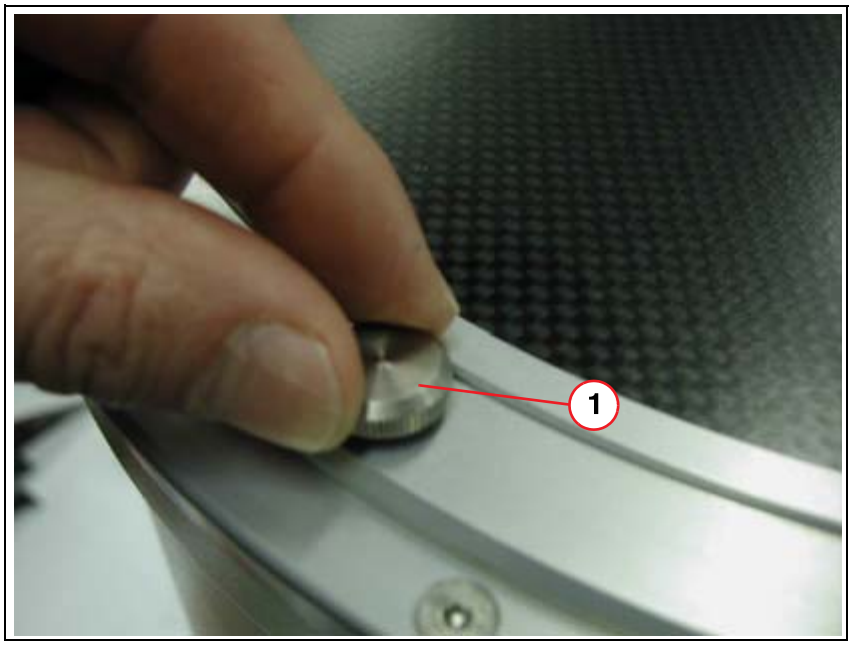

Fig. 2: Removeable grid

Fig. 3: Removeable grid with grid segment

- Unscrew I.I. ring and remove carefully (see (1/Fig. 4 / p. 10)).
- Pull out wires with plug that are wedged in at the side of the I.I. housing (see (1/Fig. 5 / p. 10)).

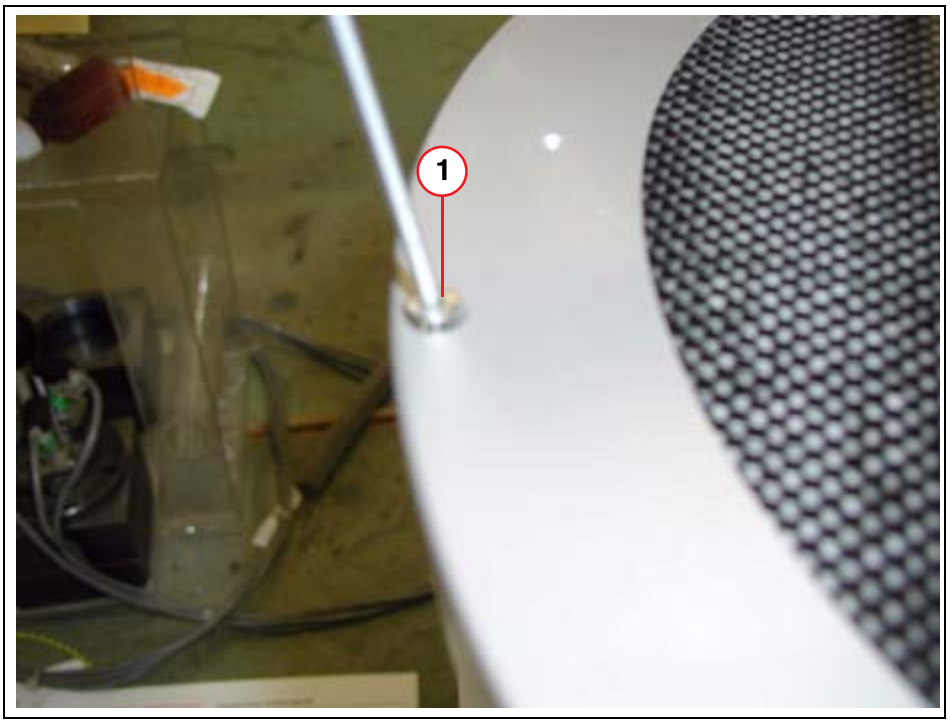

Fig. 4: I.I._ring

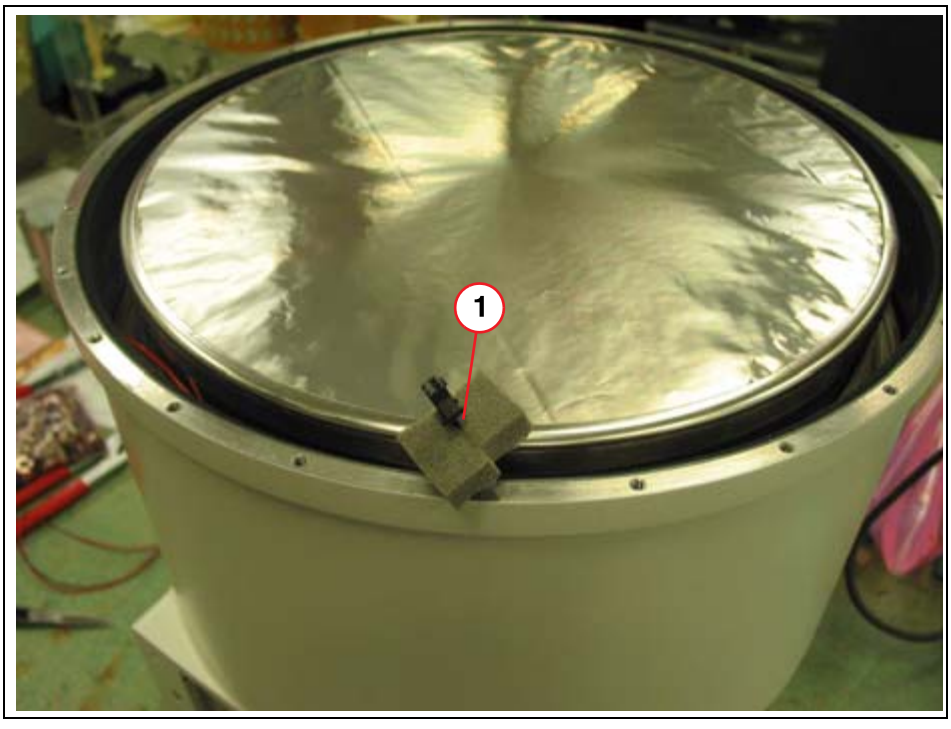

Fig. 5: Plug connector

Installation of the I.I. laser light localizer

- Take out laser light localizer (see(1/Fig. 6 / p. 11).
- Connect the two plugs ((1/Fig. 7 / p. 11) and wedge them with foam into the side of the I.I. housing ((1/Fig. 8 / p. 12).

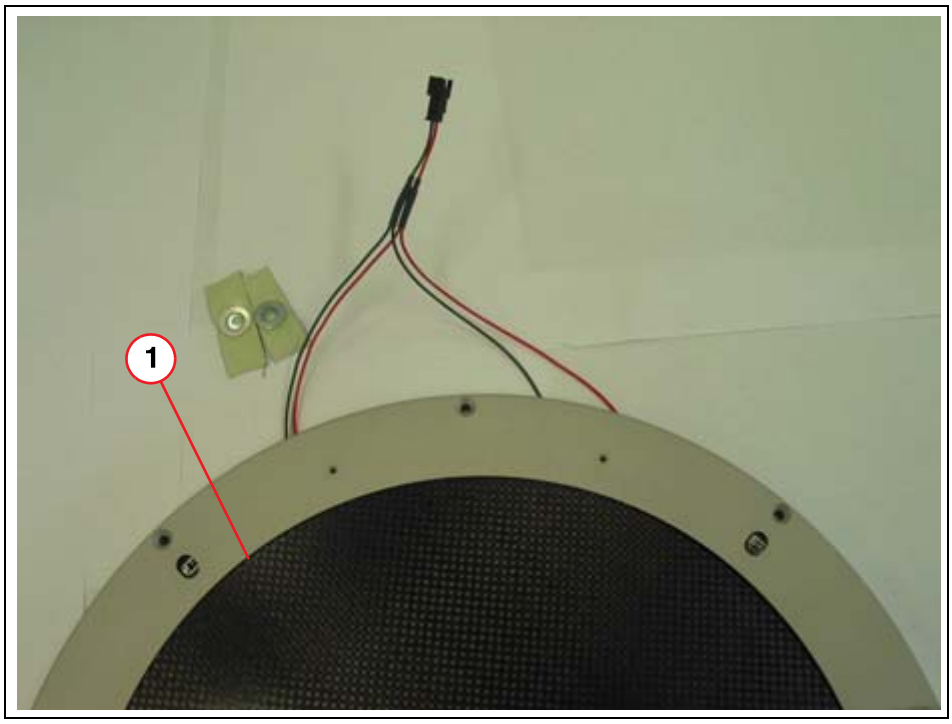

Fig. 6: I.I._1

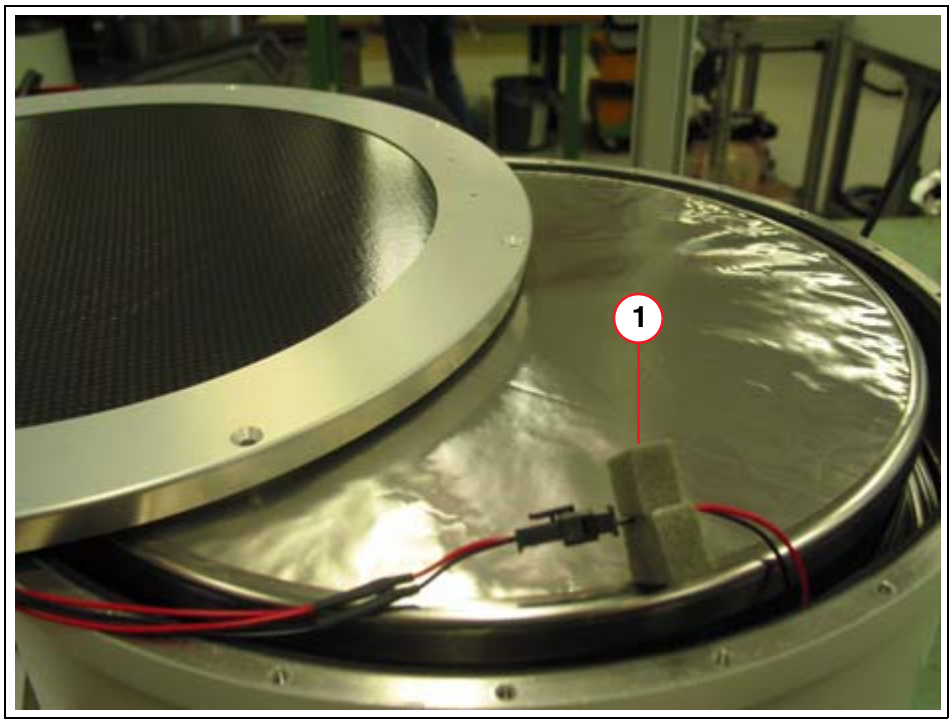

Fig. 7: I.I._2

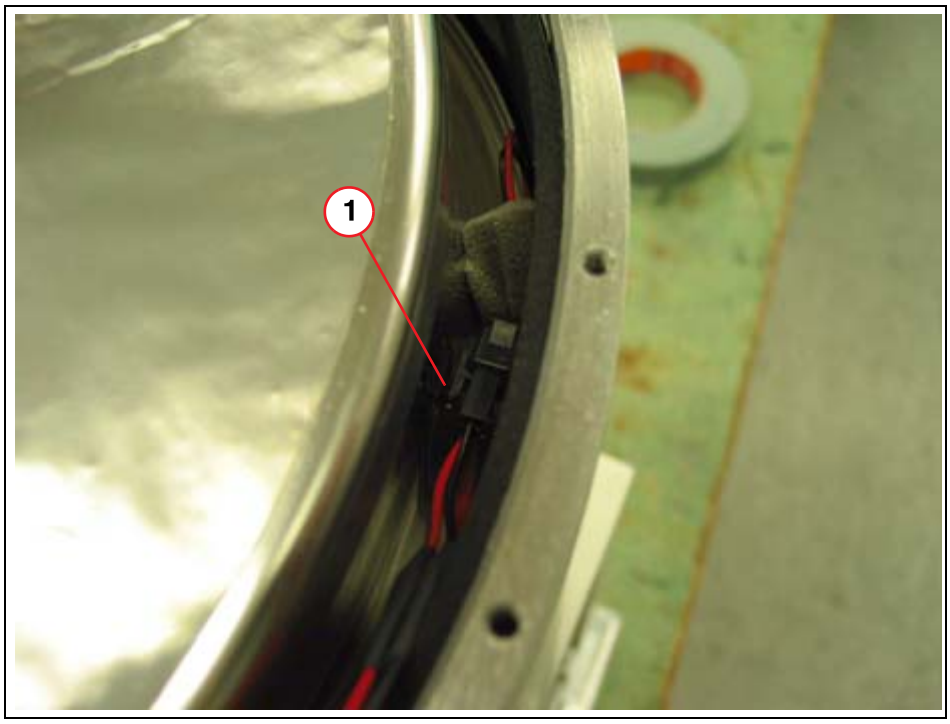

Fig. 8: I.I._3

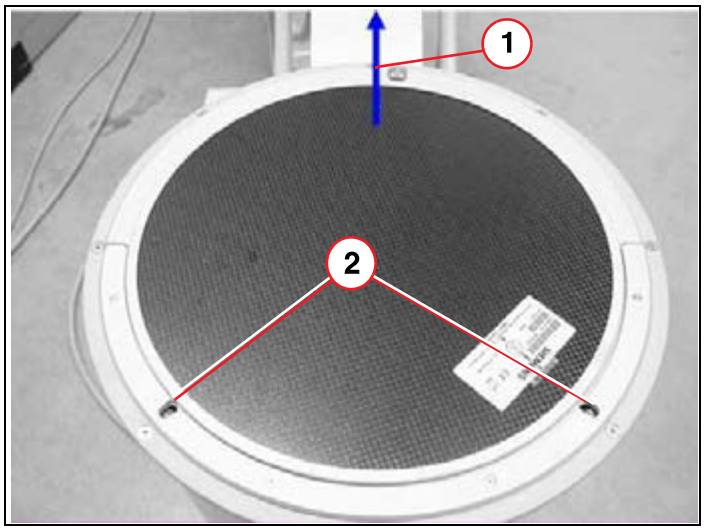

Fig. 9: Mounting the laser light localizer

- Fasten the laser light localizer to the I.I. housing with Allen screws (making sure there are no foreign bodies on the I.I. output screen); next, screw on the holder for the removeable grid, then insert the removeable grid and secure it with the knurled thumbscrew. For the mounting position of the laser light localizer, see ((1/Fig. 9 / p. 12)).For the position of the laser diodes see (2/Fig. 9 / p. 12)

Checking the settings

- Switch on the I.I. laser light localizer and adjust the two laser beams so that they strike the center of the radiation-exit window (focal point) (1/Fig. 10 / p. 13) (center of the iris diaphragm), using the two adjustment screws (AT THE SIDE OF THE LASER RING). Adjustment is done in the basic position (I.I. up, X-ray head down).

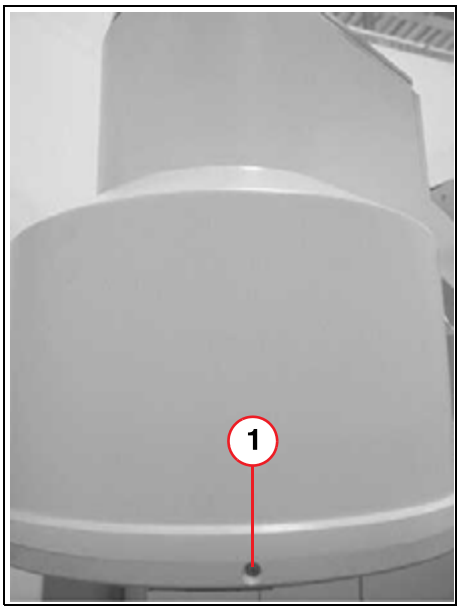

Fig. 10: Adjusting the laser light localizer

Attaching the adhesive labels (USA / Canada / UK)

- Attach the included labels (1 und 2/Fig. 11 / p. 14) as shown (only attach for USA / Canada / UK).

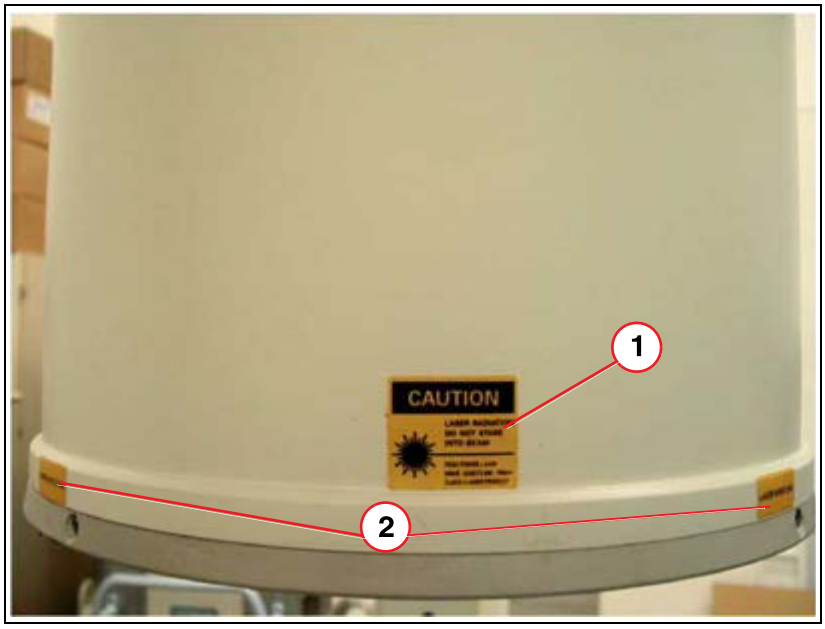

Fig. 11: I.I._Laser

Function check

- Check the function of the two keys to switch the laser light localizer on and off.
- Switch the laser light localizer back on. The laser beams must go off automatically after approx. one minute.

Final Work Steps

- File these instructions in Register 8, Service, in the system binder.

Mechanical Safety

- Ensure that the I.I. laser light localizer is seated properly on the I.I.
- Check the laser aperture for soiling and damage.
- Check the alignment of the laser beams with the tube focus.

Operating value inspection

- Check the function of the two keys to switch the laser light localizer on and off.
- Switch the laser light localizer back on. The laser beams must go off automatically after approx. one minute.

Functional checks

- Check the function of the two keys to switch the laser light localizer on and off.
- Switch the laser light localizer back on. The laser beams must go off automatically after approx. one minute.
- Check the labels (see (Fig. 11 / p. 14)).

20 Changes since previous version

N/A; first edition